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John A. Sollars JR.

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Legal Department (M-495)
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EXAMINER

CULBRETH, ERIC D

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/696,757
Filing Date: October 29, 2003
Appellant(s): SOLLARS, JOHN A.

Mr. John E. Vick, Jr., Attorney
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/18/08 appealing from the Office action mailed 1/24/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

(The appellant's statement on page 3 of Status of Amendments does not refer to amendments after final.)

The amendment after final rejection filed on 1/24/06 has not been entered.

The amendment after final rejection filed on 10/31/07 has been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

50-145875

ANDO et al

12-1975

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 10, 13-16, 18, 22-23 and 37-41 are rejected under 35 USC 103(a) as being unpatentable over Japanese Patent 50-145875.

Japanese '875 discloses an inflatable airbag cushion made of multiple fabric layers and "closely" spaced interconnected woven in joints that resist gas permeation comprising in Figure 4 first and second woven layers each having yarns running in a warp direction 2 and a weft direction 1 (English translation of symbols). There are first and second interconnected joints at either end of bag interval parts B and C, the joints running parallel to each other. In interval B, the number of yarns between joints is 6 in Figures 2 and 4 in each layer. At least some of the weft yarns 1 are crossover yarns switching back and forth from the first layer to the second layer in Figures 2 and 4, with the crossover yarns free of floats at the joints. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Japanese '875 to include between 2 and 4 yarns for each of the first and second layers (instead of 6 as disclosed in Japanese '875) as an obvious matter of design choice, as the specification gives no stated reason or particular purpose for the number of yarns between the joints, and the invention would appear to work with numbers of yarns in each layer similar to Japanese '875, so long as there are short intervals of the airbag (claims 10, 13, 18 and 39-41). As broadly recited the crossover yarns are in a plain weave configuration that

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extends across the joints (claims 14 and 16). The joints run in the weft direction 2, and the crossover yarns pass over and under warp yarns in the joints (claims 15 and 37).

The layers are free of connection between the first and second joints (claim 22). As broadly and functionally recited, the cushion is woven of fabric of "dobby" construction (claim 23). Regarding claim 38, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Japanese '875 so that the joints run in the weft direction, as the specification gives no stated purpose or particular reason for the directions of the joints, and the invention would appear to work just as well if the joints ran in the direction of Japanese '875.

(10) Response to Argument

The appellant's arguments on pages 6-18 of the 6/18/08 appeal brief are not persuasive in overcoming the rejection.

On pages 6-8 of the Brief, the appellant argues that test data shows that reducing yarns between joints improves gas retention in an unobvious manner and with unexpected and unpredictable results. The appellant also argues on page 8 of the Brief that at least one other prior art reference teaches away from a reduction of a number of yarns between interconnected joints. This has been found unpersuasive because, as pointed out by the examiner in the previous Office Action of 1/24/08 on pages 3-4, the appellant's disclosure teaches the invention will work using more than 4 yarns (as many as 12 at page 15, lines 9-14 of the application disclosure) for each layer and because the test results submitted do not show unexpected improvement. Common sense

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would dictate that fewer yarns per layer between crossovers would make for more dense fabric and hence retain more gas, and case law has held that changes due to routine experimentation or optimum ranges are obvious (In re Aller, 105 USPQ 233 (CCPA 1955)). Because the submitted graphs only compare 4 yarns between joints to 12 yarns (6 per layer is what Japanese '875 teaches), with no comparisons in between or outside the range of 4 and 12 yarns (2 and 6 yarns per layer apparently), no quantitative conclusions can be drawn regarding unexpected results. In response to appellant's remarks on page 8 that there is no cited art of reducing the yarns in a region between interconnected joints and that a prior art reference to Yamashita et al (US Patent 3,991,249) "teaches away" from a reduction of yarns, this is not persuasive because as noted above, it is obvious to optimize ranges, and appellant's specification in fact teaches using as many as 12 yarns. That prior art to Yamashita et al "teaches" a great number of yarns is not persuasive because the prior art relied upon for the rejection (Japanese '875) teaches a smaller number of yarns (6) and appellant's own disclosure suggests as many as 12 yarns will work for the invention; hence, appellant's own disclosure suggests increasing the number of yarns.

Regarding remarks on pages 7-11 that airbags with 12 yarns between joints undesirably leaked down to a lower pressure faster than those airbags of the invention, this is not persuasive because on page 15 above airbags with 12 yarns are included in the invention, and because as noted above less yarns between joints will result in less leakage; this is not "unexpected" and "unpredictable". Again, as noted above, as the test results only compare two airbags, there is no quantitative showing that the increase

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in performance is unexpected (going from 12 to 2 yarns per layer is expected to “significantly” improve gas retention)(pages 11-12 of the Brief).

On pages 11-12 of the Brief, the appellant argues that there is no motivation expressed in the Japanese ‘875 Patent for changing the number of yarns and that changing the number of yarns is hindsight, as appellant's claimed invention is the only source for the number of yarns claimed. This is not persuasive because appellant himself includes the at least the number of yarns taught by Japanese ‘875 as being able to accomplish the invention on page 15 of the disclosure, and because as noted above optimizing the number of yarns has been held as obvious. The motivation for optimizing comes from the very function of the airbag, which is to inflate and retain air during the collision while slowly dissipating air during and after the collision. Although Japanese ‘875's disclosure is brief is written in the 1970's (page 12 of remarks), as noted above, it would have been obvious at the time of applicant's invention to adjust/optimize for pressures used at the time of appellant's invention, as the modification is not a bodily incorporation of parts. Appellant's remarks refer to a side curtain airbag on page 12 of the Brief, but a side curtain is not claimed. Regarding page 13 of the Brief, where the appellant states the reference was not directed to gas retention, it is noted that gas retention is always an issue to be optimized with an airbag, as that is how an airbag works.

Contrary to appellant's remarks on pages 13-14 of the Brief, there is a prima facie case for obvious (to optimize as held by case law is obvious) and the advantages of less yarns would be obvious in view of the very nature of an airbag.

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The appellant states the specification is clear and specific on page 15, lines 15-17 (page 14 of the Brief), but the specification is clear that no more than four yarns is "preferred". The specification also states on page 15 as noted above that as many as 12 yarns will work, which would include Japanese '875's 6 yarns. Also as noted above, if Yamashita et al is prior art teaching more than four yarns, so is applicant's disclosure on page 15, where it teaches up to 12 yarns may be used (pages 14-15 of the Brief).

Regarding the argument on pages 15-16 of the Brief that Japanese '875 has no suggestion to alter the number of yarns and that the rejection is hindsight, as above, it is obvious to optimize in view of the very nature of airbag.

Finally, regarding the appellant's arguments on pages 16-17 that the rejection is improper because there is no case law requiring showing other discloses embodiments, this seems to not be germane to the issue. The examiner's position is that without the showing of quantitative results as to what happens with other numbers of yarns between joints, there is no showing that using no more than four yarns as claimed yields unexpected and unpredictable results, as common sense would lead one to deduce that reducing the number of yarns between joints would retain gas better, and as retaining gas is desirable in an airbag because of the very nature of how it works.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

/Eric Culbreth/

Primary Examiner, Art Unit 3616

Conferees:

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